



SIGNIFICANCE OF SOME MEDICINAL PLANTS OF NORTH-EASTERN REGION

Dr. Vinay Kumar Singh

Department of Botany , K.S.Saket P.G College , Ayodhya , U.P.

ABSTRACT

Plants used for medicinal purpose contribute significantly to the development of major medical drugs that are used today. For centuries plants have provided mankind with useful , sometimes life saving drugs. India has been known to be rich repository of medicinal plants. Medicinal plants have always been the principal source of medicine in India. As north-eastern region of India is one of the biodiversity hotspot so it contains so many flora which show different chemical properties which are directly or indirectly beneficial for society. Assam is an evergreen state. The region has an abundance of medicinal plants known to the native people. The wide geographical and climatic diversity of Assam provides a repository of valuable indigenous system of medicine, as their



extracts in various forms are being used in traditional system of medicine for treatment of human ailment. Some common medicinal plants used by rural people of Assam are Doron bon (*Leucas aspera*) , Dubari ban (*Cynodon dactylon*) , Bel (*Aegle marmelos*) , Hati khutura (*Cinnamomum tamala*), Ou tenga (*Dilenia indica*) , Ahot goss (*Ficus religiosa*) , Joba phul (*Hibiscus rosasinesis*), Mosonduri (*Houttuynia cordata*) , Dalim (*Pulim granatum*) , Omara (*Spondias pinnata*) , Hilikha (*Terminalia chebula*), Chirota (*Artemisia vulgaris*) . Purnanwa (*Boerhavia asiatica*) , Aparajita (*Clitoria ternatea*), Kehraj (*Eclipta alba*) , Pani kolmou (*Ipomea aquatic*) , Bor puni (*Pistia stratiotes*) , Arjun (*Terminalia orjeina*) , Kola kasu (*Colocasia macrorhiza*) , Sewali (*Nyctanthes arbor*) , etc. These plants are used in various diseases like diarrhoea , dysentery , jaundice , fever , diabetes , rheumatism , asthma , cancer , etc.

KEYWORDS : wide geographical and climatic diversity , medicinal plants.

INTRODUCTION

North East India comprising the states of Arunachal Pradesh , Assam , Manipur , Meghalaya , Mizoram , Nagaland , Sikkim and Tripura lies between 21°34' 2N to 29°50' 2N latitude and 87°32' 2E to 97°52' 2E longitudes and covers an area of ca 262060sq km. It represents ca 8% of the country's total geographical area. The region is characterised by diverse physiography , ranging from plains , plateaus and mountains with associated valleys. The region receives moderately high rainfall and the average minimum and maximum are 1650mm and 6320mm , respectively.

The North-east India is part of both Himalayas as well as Indo-Burma bioiversity hotspots in the world . It forms a unique biogeographic province encompassing major biomes recognised in the world. It has the richest reservoir of plant diversity in India and is one of the 'biodiversity hotspots' of the

world supporting about 50% of India's biodiversity. All types right from the grassland , meadows, marshes , swamps , scrub , forests , mixed deciduous forests , humid evergreen forests , temperate and alpine vegetation are found here . The varied forests types found in region are home to numerous plants and animals. Specially , the region exhibits the richest diversity in orchids , zingibers , yams , rhododendrons , bamboos, canes and wild relatives of cultivated plants . It is also considered as cradle of 'angiosperms' as primitive plants families such as Mangolinaceae , Lauraceae , Hamamelidaceae , Degenriaceae , Tentracentraceae and Lardizabalaceae are well represented here. About 50% of the total 17500 flowering plants hail from the region , and 40% of them are endemic. Wild relatives of 132 economically important and notable include citrus, banana, rice, sugarcane, and pulses , are originated in this region .

This region of India is one of the biodiversity hotspot so it contains so many flora which show different chemical properties which are directly or indirectly beneficial or harmful for society. Northeast Indian states are the store house of medicinal plants which are naturally grown and available in the forests. It is known for high ethnic and biological diversity and is often referred to as biological hotspot.

SOME IMPORTANT MEDICINAL PLANTS OF NORTH EASTERN REGION :

Doron bon (*Leucas aspera*) is used by rural and tribal population in assam in various problems like dysentery , diarrhea , sinusitis , headache , tonsil , etc.

Cynodon dactylon is known as dubari bon in Assam. Whole plant of cynodon dactylon is used for the treatment of diarrhea and dysentery. Paste of cynodon dactylon is applied to cuts and wounds to stop bleeding. Its juice is used in the treatment of piles. A solution of leaf juice with sugar and honey is used in the retention of urine. Leaf juice is also used for the treatment of allergy and prickly heat.

A solution of leaf juice with honey and sugar candy is used for the treatment of fever. bel(aegle marmelos) 3-4 fresh leaves are ground to extract the juice which is taken with sugar once daily for 3 days to cure nasal bleeding. sotmul (*Asparagus racemosus*) - decoction of root is administered orally to cure gallstone. kordoi (Averrhoa carambola) – for curing jaundice , fruit juice mixed with juice of sugarcane is administered thrice daily joba phul (*Hibiscus rosa-sinensis*)- 2-3 drops of crushed flowers juice are poured in the nostril to cure sinus. monsunhuri (*Houttuynia cordata*)- fresh leaves are crushed and eaten raw or steam cooked and taken as a remedy for constipation and indigestion. dalim (*Punica granatum*) – leaves , barks, flowers and seeds crushed and the resultant paste is applied on mouth sores.

tezpat (*Cinamomum tamala*)- to cure diabetes , 4-5 fresh or dried leaves are simply crushed by hand or kept dipped in a glass of water over-night. Next morning , the filtrate extract is administered in empty stomach. korocho (*Pongamia pinnata*)-fresh tree barks are boiled in water. The filtrate decoction is taken orally thrice daily to cure blood. ahut goss (*Ficus religiosa*) – tree bark along with tortoise shell is burned and the resultant ash is applied over cuts and wounds as antiseptic and for quick healing. *Solanum kurzii* Brace ex Prain (*Solanaceae*).

The fruit is used as anti allergy by the *Mao Naga* tribe of Manipur. The fruit is crushed and the juice is applied to the allergy area of the body. *Pouzolzia hirta* Hassak (*Uritaceae*).

It is a small herb the root is grinded into a paste and applied to the boil in any part of the body to extract out the pus. The sticky paste acts like plaster to suck the pus out. It is very effective and widely practised by the *Khasi* tribe of Meghalaya . Also , the local herbal practitioners use *P.hirta* and *P.viminea* Wedd. Root paste for fracture bone setting.

Lysimachia racemosa Lam. (*Primulaceae*).

The leaf of this herb is used by *Khasi* tribe of Meghalaya for de-worming in children as well as adults. The fresh leaf is eaten raw. A handful of the leaves are sold for Rs 10/- in Shillong bazar. It is said to be very effective for de-worming and very popular with the local people. *Litsea cubeba* (Lours) Pers. (*Lauraceae*).

The bark of the tree is used for treating foot and mouth disease of cattle, *Khasi* and *Jaintia* tribes in Meghalaya. The bark is ground and given to cattle two times a day for 3-4 days to cure it completely *Anaemone revularis* Buch-Ham ex DC (*Ranunculaceae*).

The leaf is crushed and aroma is inhaled to cure sinus problem. It gives a burning sensation *Dendrobium denudans* D. don, *D. eriaflorum* Griff., *D. transparent* Wall. and *D. devonianum* Past. (*Orchidaceae*)

The pseudobulbs of these orchids are collected when the leaves have fallen. These orchids are collected in large quantities by the local people especially in Manipur and Mizoram. It is sold for Rs 200/- to Rs 600/- per kg depending on demand from across the border in Myanmar. Except flowers, the local villagers have no knowledge of the use of the orchids. It is believed that the orchids may be used in the manufacturing of some drugs.

Lemanea australis Alkins (*Leimaneaceae*)

It is fresh water green alga found on stones in the river of Sugnu area in Chandel district, Manipur. Locally, known as Nungsham (stone hair) and collected by the local villagers during the months of October to December for its delicacy. The alga eaten fresh or in dried form is very rich in iron source and considered good for health.

DISCUSSION

Many research papers on rich bio resources of the region have been published by various workers but so far no tangible outcome of economic benefit for the people. Also, many interesting medicinal plants are being reported, for example, the recent report on *Croton caudatus* (*Euphorbiaceae*) as anticancer from Churachandpur district, Manipur which had caught many national news papers attention. Thousands of patients from different states of India had visited the man in his village and taken leaf decoction. Therefore, it requires urgent systematic investigation using biotechnological tools to authenticate and develop new novel drugs from the rich bio resources of the region. The studies must be taken up on priority basis otherwise it will be a great loss for India and mankind as the environmental scenario of the region is changing rapidly. The bio resources along with rich indigenous knowledge systems are depleting so fast due to various anthropogenic activities and rapid urbanization. Also due to lack of knowledge on good harvest practices, many plant collectors over exploited many important medicinal plants without knowing the future consequences. The region also has a unique problem of enforcing conservation law. The entire except for Assam, Tripura and Sikkim 90% of the land belong to the communities and the state government has no control over them. As a result, in spite of the ban of tree cutting imposed by the supreme-court, people still continues to harvest the forests for economic gains. Many of the tribal community whose life styles were once very simple, but have now become sophisticated and urbanized. With changing trends, the sustainable utilisation of resources is getting lost. The traditional knowledge system they possessed or inherited as a legacy is vanishing fast or polluted with the impact of modernity.

This valuable information along with the rich bio resources of the region needs to be conserved and taken up for sustainable utilisation involving the various ethnic tribes. They should be trained in good harvest practices and post harvest technology. The rich bio resources have to be translated into products and uses without which the rich resources have no value for the poor stricken people of the region who are the custodian of it. The people should be encouraged to take up entrepreneurship sustainably utilising the rich bio resources and indigenous knowledge systems with the value addition to it through scientific and technological inputs from the various research institutions in the country. Therefore, the need of the hour for the region is to capitalise like other neighbouring South East Asian countries the rich bio resources along with the rich indigenous wealth for the people in the region and our country.

REFERENCES

1. Plant wealth of northeast India with reference to ethnobotany AA Mao¹, TM Hynniewta² & M Sanjappa³

2. Botanical survey of India, eastern circle , IITMukhrah , Shillong 793 003 , Meghalaya.
3. Botanical survey of India, Kolkata 700 064.



Dr. Vinay Kumar Singh
Department of Botany , K.S.Saket P.G College , Ayodhya , U.P.